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# Green Tasks, Grey Gaps: Delivering a Just Transition for Women and Youth in MENA [1]


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[1] This Policy Brief is part of the FEMISE Policy Brief Series and is based on the FEMISE Conference Paper entitled: Labor Market Impacts of the Green Transition in the MENA by the same authors.

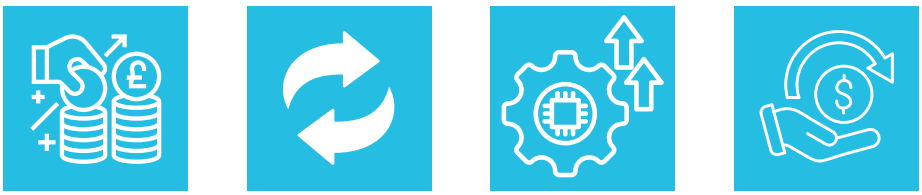
# 1. Executive Summary

The escalating threats of climate change have heightened the necessity for global decarbonization. As governments across the Middle East and North Africa align their development strategies with global decarbonization, a comprehensive analysis of Egypt, Jordan, Palestine, and Tunisia reveals a labor market in the early stages of a shallow transition. While the prevalence of occupations containing at least one green task ranges from 17% to 29%, the actual intensity of green work remains low, with environmental tasks accounting for less than 7% of total job activities.

This transition is currently marked by significant demographic disparities; men are two to three times more likely to hold green jobs than women, and young workers are disproportionately concentrated in polluting brown industries while green roles are largely held by prime-age adults. Surprisingly, green employment is found to be more prevalent in the informal sector, suggesting that much of the region's environmental labor occurs within unregulated roles that lack social protections. To ensure this shift does not exacerbate existing inequalities, public policy must prioritize targeted reskilling for women and youth alongside the formalization of green labor to build an inclusive and sustainable regional economy.

# 2. Introduction & Mediterranean Context

The global imperative for decarbonization is a "green megatrend" that is fundamentally redrawing the industrial landscape and labor markets worldwide. For decades, transitional MENA economies have remained tethered to carbon-intensive development models, driven either by direct resource extraction or reliance on remittances from oil-rich neighbors. However, recent commodity-price volatility and a deepening global commitment to low-carbon production have increased the pressure on regional governments to decouple economic growth from fossil fuel dependence. In response, nations across the region have integrated ambitious climate targets into national strategies, such as Egypt's Vision 2030 and Tunisia's goal to reduce carbon intensity by 45% by 2030.



Despite these policy pronouncements, the regional labor market impact remains under-researched, representing a critical gap in our understanding of how a "just transition" might unfold. This study addresses this gap by providing a comprehensive, longitudinal assessment of green employment in Egypt, Jordan, Palestine, and Tunisia. Moving beyond the "fuzzy" binary indicators often used in prior literature, our methodological approach utilizes a high degree of granularity to impute job greenness at the 4-digit occupational-code level. By implementing a continuous metric of green task intensity, we are able to facilitate a distinction between occupations with high-intensity green functions and those that merely contain environmental elements, providing a comprehensive map of the region's environmental labor footprint.

# 3. Approach and Results

Our analytical framework utilizes Labor Market Panel Surveys and Labor Force Surveys to track the evolution of green employment across a critical decade of climate policy development. By mapping these surveys to the U.S. O*NET database, we go beyond industry-level generalizations to examine the specific task composition of occupations. Our empirical strategy relies on three primary metrics: binary green prevalence (the percentage of workers in jobs with at least one green task), continuous green intensity (the average share of green tasks within an occupation), and a "brown" job indicator (identifying roles in carbon-intensive or polluting activities). This multi-dimensional approach allows us to differentiate between workers who are merely adjacent to the green transition and those whose core functions are environmentally transformative.

The empirical results reveal a significant "intensity gap" across the region. While the binary prevalence of green jobs is relatively high, ranging from 17% in Egypt to 29% in Palestine (Figure 1), the actual green task intensity consistently falls below 7% in all surveyed countries (Figure 2). This suggests that while many occupations have begun to incorporate environmental elements, the region lacks high-density green roles. Furthermore, our longitudinal analysis shows that in countries like Jordan and Tunisia, "brown" employment has increased or remained stagnant in key industrial sectors, indicating that the transition away from carbon-intensive roles is not yet keeping pace with policy announcements.
A stark demographic "green divide" characterizes the regional results. Our analysis reveals that men are two to three times more likely than women to hold green jobs, as women remain largely concentrated in "grey" service sectors like education and health (Figure 3). Furthermore, we identify a "youth paradox": while older, prime-age adults dominate green roles in managerial and professional categories, workers aged 15–29 are disproportionately represented in brown industries (Figure 4). Surprisingly, both green and brown tasks are more prevalent in informal employment than in formal jobs (figure 5). This suggests that the region's environmental labor, such as waste management or sustainable agriculture, is largely occurring within unregulated frameworks, leaving these "green" workers without formal social protections or stable career pathways.

# 4. Conclusion

The evidence suggests that the green transition in the MENA region is currently marked by a "shallow" integration of environmental tasks and significant structural imbalances. While the relatively high binary prevalence of green jobs provides a foundation, the low task intensity and the exclusion of women and youth from high-intensity roles present major barriers to a "just transition." Moreover, the concentration of green labor in the informal sector raises concerns that the ecological shift may reinforce existing socio-economic inequalities. Without targeted intervention, the transition risks benefiting only a narrow segment of the established, urban workforce while leaving vulnerable populations behind in declining or unprotected sectors.

## Policy Recommendations for an Inclusive Transition

To ensure a socially just and economically sustainable transition, policymakers must move beyond broad environmental targets and adopt demographic-specific interventions:

### Greening Female-Dominated Sectors

Rather than focusing solely on shifting women into male-dominated technical fields, governments should "green" the sectors where women are already most active. This involves updating curricula and occupational standards in education and health to incorporate environmental sustainability and climate education, effectively elevating these "grey" roles into the green economy.

## Targeted Youth Vocational Training

To resolve the "youth paradox," vocational training programs must be redesigned to transition young workers from polluting brown crafts to high-intensity green roles in construction, utilities, and renewable energy. Governments should implement "green apprenticeship" subsidies for firms that hire youth into environmental roles to prevent them from being locked into declining industries.

## Formalizing the Green Workforce

Since much of the region's environmental work currently occurs within the informal economy, policymakers should introduce simplified registration processes and social security incentives for informal green workers. This formalization is essential to provide social protections for those performing critical environmental tasks in sectors like waste management and circular economy activities.

## Decentralizing Green Opportunity

To counter the urban bias of current green jobs, investment should be directed toward rural green infrastructure, such as sustainable agribusiness and decentralized renewable energy projects. This ensures that the benefits of the green economy are distributed more equitably across geographic regions.

## Industry-Academia Partnerships

National education strategies should embed green skills across all levels, from basic environmental literacy to high-level technical training. Close cooperation between industries and educational institutions is vital to closing the skill gaps in technical and critical reasoning required for high-intensity green functions.

## Support for green entrepreneurship

Support mechanisms for green entrepreneurs should be extended to provide affordable financing, loan facilities, tax incentives and entry into high-innovation markets, thereby leveraging market mechanisms to support labor reallocation.

With careful planning and inclusive policy design, MENA countries can avoid the dislocations and inequities of past transitions and instead leverage decarbonization as a driver of shared and sustainable development.

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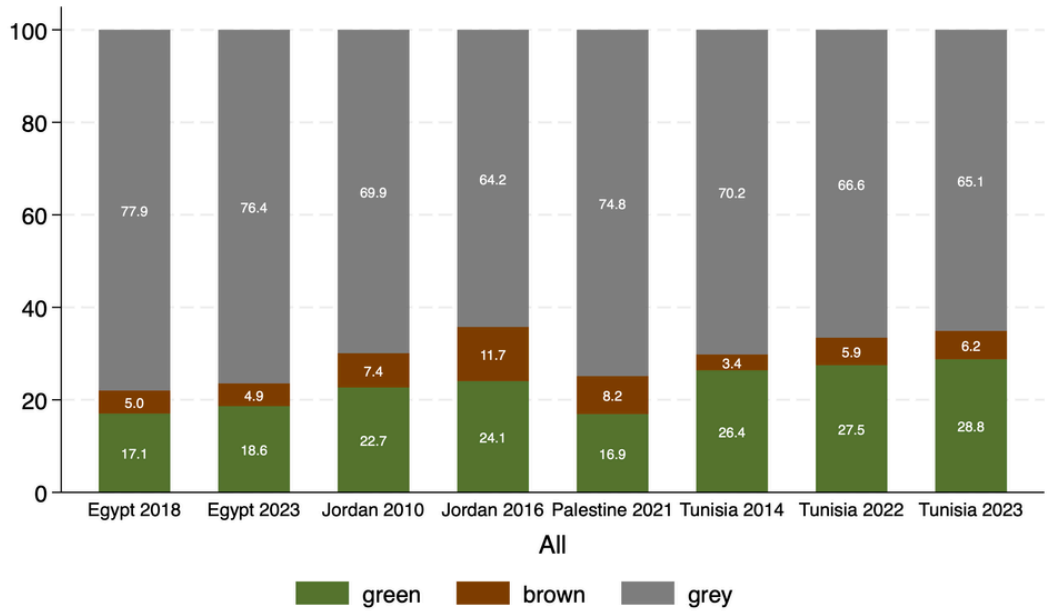
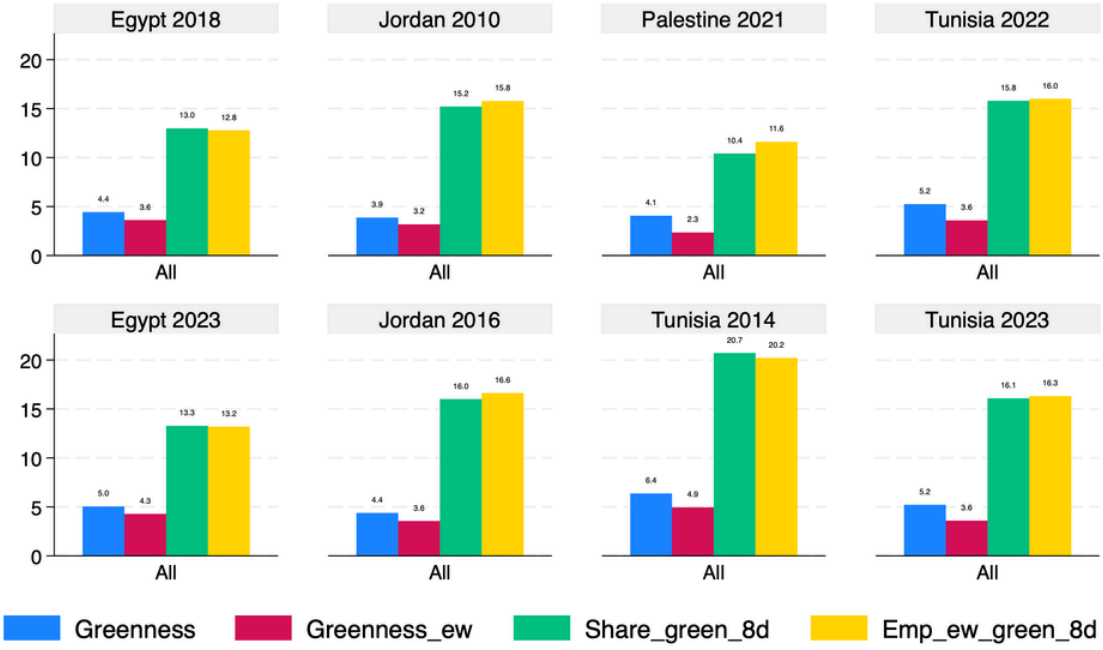


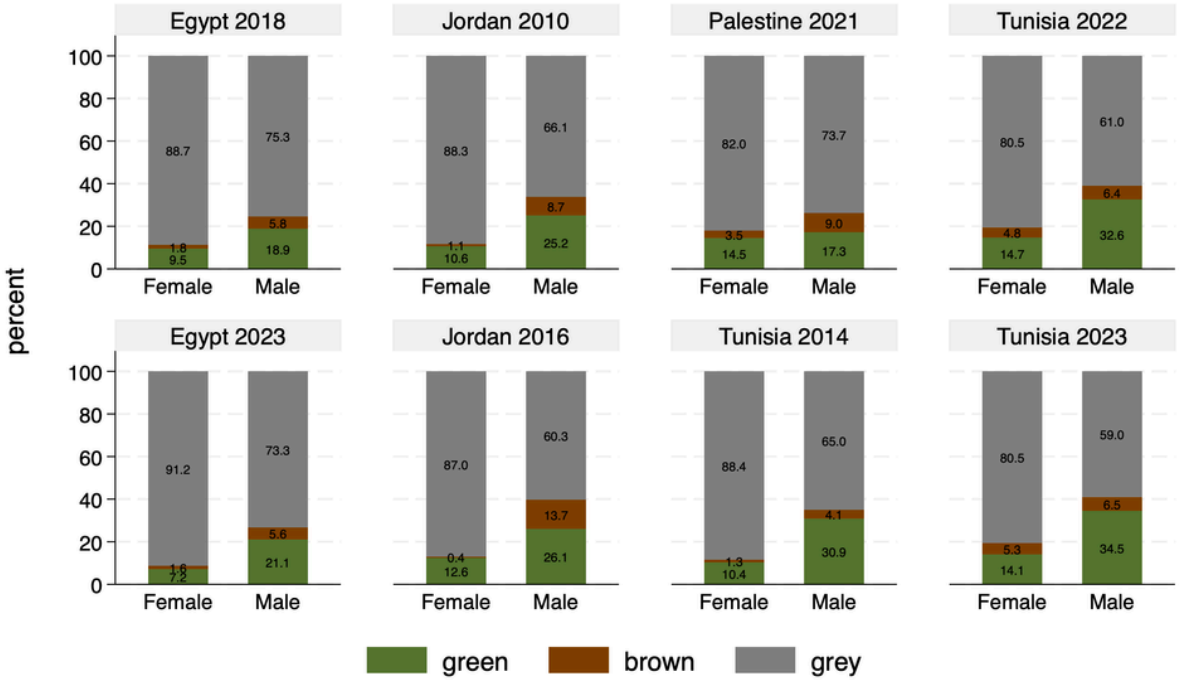

Source: Authors' calculations, based on ELMPS 2018 and 2023, JLMPS 2010 and 2016, TLMPS 2014, Tunisia LFS 2022 and 2023 and Palestine LFS 2021.

**Figure 2: Green intensity of occupations and employment by country and year**



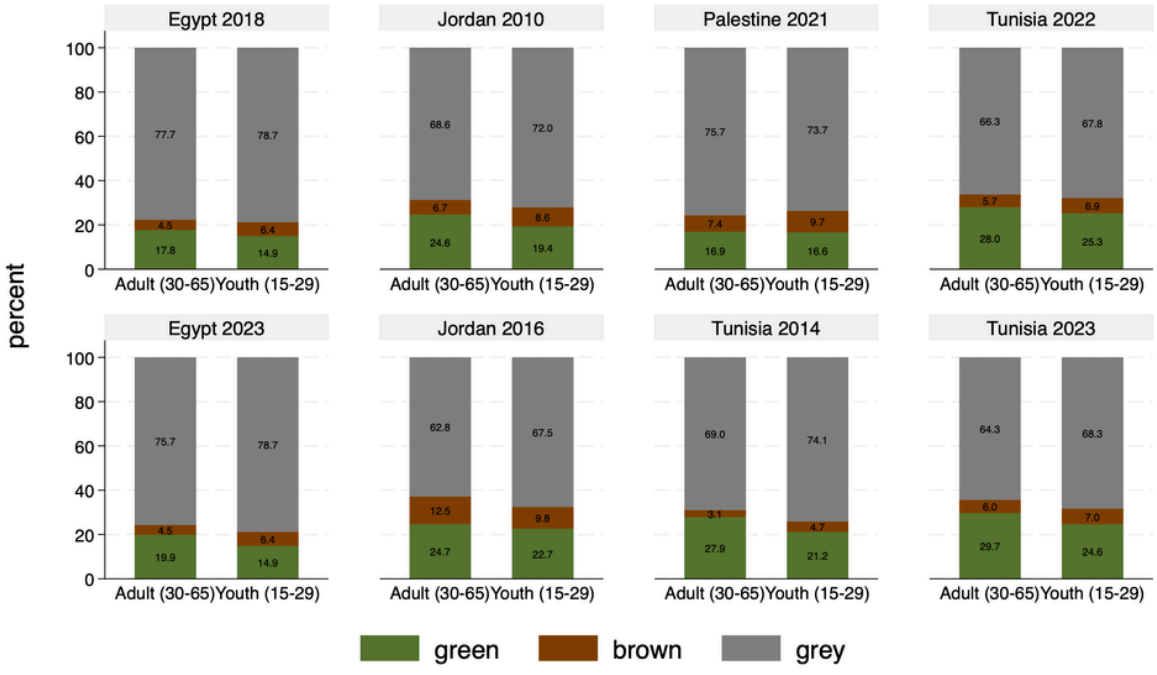

Source: Authors' calculations, based on ELMPS 2018 and 2023, JLMPS 2010 and 2016, TLMPS 2014, Tunisia LFS 2022 and 2023 and Palestine LFS 2021.

**Figure 3: Prevalence of Green, Brown and Grey Occupations by sex, country and year**



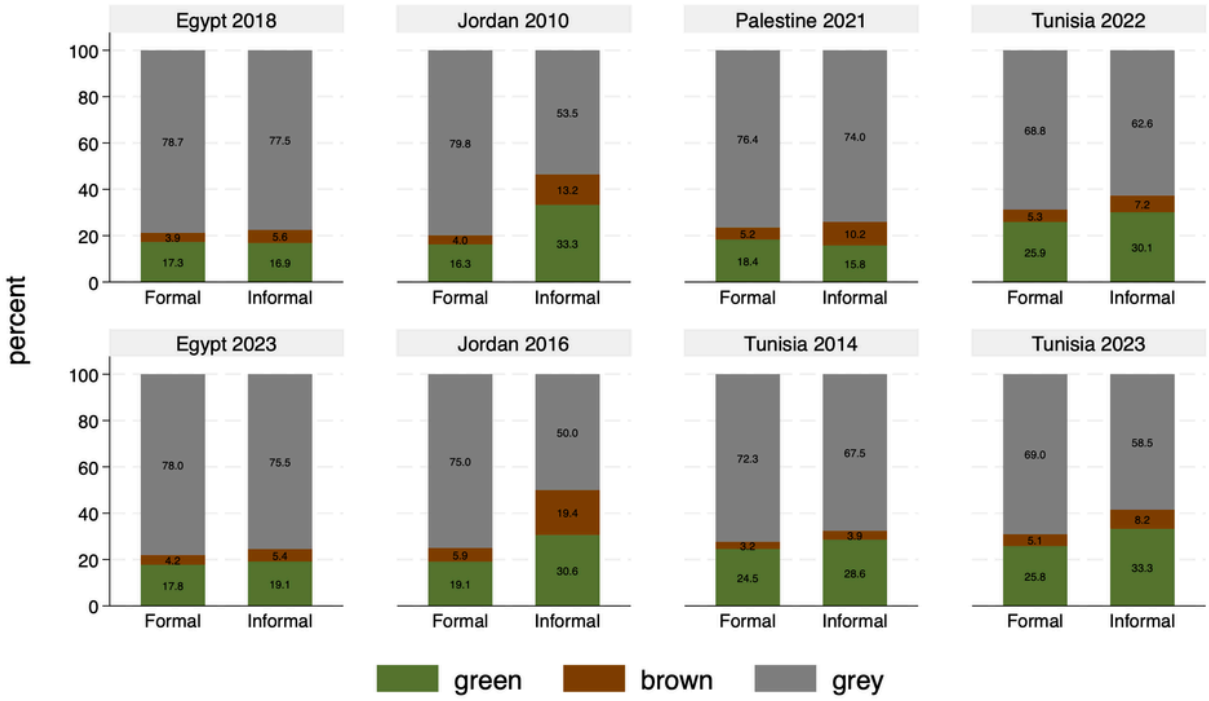

Source: Authors' calculations, based on ELMPS 2018 and 2023, JLMPS 2010 and 2016, TLMPS 2014, Tunisia LFS 2022 and 2023 and Palestine LFS 2021.

**Figure 4: Prevalence of Green, Brown and Grey Occupations by age, country and year**




Source: Authors' calculations, based on ELMPS 2018 and 2023, JLMPS 2010 and 2016, TLMPS 2014, Tunisia LFS 2022 and 2023 and Palestine LFS 2021.

**Figure 5 Prevalence of Green, Brown and Grey Occupations by formality of employment, country and year**




Source: Authors' calculations, based on ELMPS 2018 and 2023, JLMPS 2010 and 2016, TLMPS 2014, Tunisia LFS 2022 and 2023 and Palestine LFS 2021.

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## About FEMISE

FEMISE, the Forum Euroméditerranéen des Instituts de Sciences Économiques, is a Euro-Mediterranean network of over 100 economic and social research institutes from both shores of the Mediterranean. Established in Marseille, France, in 2005 as an NGO, FEMISE promotes dialogue on economic and social policies to foster cooperation and mutual benefit between Europe and its Mediterranean partners. Coordinated by the Economic Research Forum (ERF) in Egypt, FEMISE focuses on strengthening research capacity, fostering public-private dialogue, disseminating research findings, and building partnerships to support regional collaboration and sustainable development.

## About IEMed

The European Institute of the Mediterranean (IEMed), founded in 1989, is a think-and-do tank focused on Euro-Mediterranean relations. Guided by the Euro-Mediterranean Partnership (EMP), European Neighbourhood Policy (ENP), and Union for the Mediterranean (UfM), it promotes cooperation, mutual understanding, and intercultural dialogue to build a shared space of peace, stability, and prosperity. IEMed is a consortium of the Catalan Government, the Spanish Ministry of Foreign Affairs, the EU, and the Barcelona City Council, with contributions from civil society through its Board of Trustees and Advisory Council.

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The Economic Research Forum (ERF), established in 1993, is a regional network promoting high-quality economic research for sustainable development in Arab countries, Iran, and Turkey. Based in Cairo, Egypt, with a branch in Dubai, UAE, ERF builds research capacity, supports independent studies, and disseminates findings through publications, seminars, and the ERF Policy Portal. As a non-profit organization, ERF is supported by regional and international donors and guided by a distinguished Board of Trustees and a network of researchers.

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